

## REMARKS

Claims 1-12, 14-25 and 27-35 are pending in the present application. By this amendment, Claims 1, 17 and 30 are amended; and Claims 13 and 26 are canceled. Applicants respectfully request reconsideration of the present claims in view of the foregoing amendments and the following remarks.

### I. Prior Art Rejections:

Claims 1-35 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 4,349,644 to Iwanami et al (hereafter "Iwanami"). This rejection is respectfully traversed.

Claim 1 is directed to, *inter alia*, a substantially water-free thermoplastic article consisting essentially of from about 50 to about 99% by weight of an unmodified polyvinyl alcohol and from about 49 to about 1% by weight of a thermoplastic elastomer. Claim 17 is directed to, *inter alia*, a thermoplastic article consisting essentially of from about 50 to about 99% by weight of an unmodified polyvinyl alcohol and from about 49 to about 1% by weight of a thermoplastic elastomer, wherein the thermoplastic article has less than about 2.0 percent by weight of water. Claim 30 is directed to, *inter alia*, a substantially water-free blend composition consisting essentially of from about 50 to about 99% by weight of an unmodified polyvinyl alcohol and from about 49 to about 1% by weight of a thermoplastic elastomer.

Iwanami is directed to hydrolyzed ethylene polyvinyl acetate compositions. These compositions have an ethylene content in the range of 20-55% by mole (col.2, lines 29-30). Minimal amounts of PVOH may be added to the final hydrolyzed ethylene polyvinyl acetate composition.

It is respectfully submitted that Iwanami fails to teach or suggest Applicants' claimed invention. Iwanami teaches a polyvinyl alcohol that has been chemically modified and is, therefore, not an "unmodified" polyvinyl alcohol as claimed by Applicants. As shown in the Specification, not all polyvinyl alcohols may be used in a thermoplastic article in an unmodified form. The Examiner indicates that the compositions of Iwanami may also contain other thermoplastic resins, such as unmodified polyvinyl alcohol (col. 4, lines 8-38). In response, Applicants respectfully submit that Applicants have amended their claimed invention to recite that the present invention consists essentially of from about 50 to about 99% by weight of an unmodified polyvinyl alcohol and from about 49 to about 1% by weight of a thermoplastic

elastomer. Applicants respectfully submit that the hydrolyzed ethylene polyvinyl acetate compositions in Iwanami would be excluded from Applicants' claimed invention since the hydrolyzed ethylene polyvinyl acetate compositions would materially alter Applicants' claimed invention. The hydrolyzed ethylene polyvinyl acetate compositions of Iwanami are used to form water insoluble molded articles. Applicants' claimed compositions are used to form water-soluble films and fibers. The Examiner has requested that Applicants provide additional evidence of how the hydrolyzed ethylene polyvinyl acetate would materially alter Applicants' claimed invention and how the removal of the hydrolyzed ethylene polyvinyl acetate would materially alter Iwanami. Applicants respectfully submit that the teachings of Iwanami provide all the evidence needed and to ignore the direct teachings of Iwanami is improper. Iwanami clearly states that the hydrolyzed ethylene polyvinyl acetate compositions of Iwanami are used to form films, sheets and vessels for wrapping and packaging foods, electric and electronic parts and machine parts. These materials are clearly not water soluble, and it would not be desirable for them to be water soluble. No one wants a packaging material for the items listed that would eventually dissolve in water. As such, to remove the hydrolyzed ethylene polyvinyl acetate from the Iwanami compositions would result in a water-soluble packaging material. As such, it would not have been obvious to remove the hydrolyzed ethylene polyvinyl acetate.

Conversely, since Applicants' claimed films are used in disposable products, it would not be obvious to add hydrolyzed ethylene polyvinyl acetate as this would create a water-insoluble film (see Iwanami) and would defeat the purpose of making a film useful in disposable personal care articles. As such, any water insoluble material, such as hydrolyzed ethylene polyvinyl acetate compositions, would be excluded from Applicants' invention, as now claimed. In addition, since Iwanami is directed to the formation of molded articles, it would not have been obvious to remove the hydrolyzed ethylene polyvinyl acetate compositions from Iwanami as this would completely destroy the intended purpose of Iwanami – to form a molded thermoplastic product. As such, the evidence for excluding hydrolyzed ethylene polyvinyl acetate from Applicants' claimed invention as well as keeping the hydrolyzed ethylene polyvinyl acetate in Iwanami is clearly provided since the hydrolyzed ethylene polyvinyl acetate would negatively impact the water solubility of Applicants' claimed compositions and articles, thereby negatively impacting the characteristics of the desired final products. Accordingly, it is respectfully submitted that Iwanami fails to teach or suggest Applicants' claimed invention.

For at least the reasons given above, Applicants respectfully submit that Claim 1 and Claim 17 are allowable over the art of record. Furthermore, since Claims 2-16 and 18-35 recite additional claim features and depend from Claim 1 or Claim 17, these claims are also allowable over the art of record. Accordingly, Applicants respectfully request withdrawal of this rejection.

Claims 1-35 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 6,262,175 to Jury et al (hereafter "Jury"). This rejection is respectfully traversed.

Applicants' description of the invention may be relied upon as above.

Jury is directed to thermoplastic elastomer compositions containing vulcanized rubber crumb, polyolefin, an elastomer, a vinyl polymer (such as PVOH) and other known additives. Additionally, Jury is directed to vulcanized rubbers that are used for tires, etc. There is, however, no teaching or suggestion to use these compounds in thermoplastic articles, such as films and fibers, and the use of these films and fibers in personal care articles. Finally, Jury uses, at most, 30% PVOH.

It is respectfully submitted that Jury fails to teach or suggest Applicants' claimed invention. As before, Jury teaches a polyvinyl alcohol that has been chemically modified and is, therefore, not an "unmodified" polyvinyl alcohol as claimed by Applicants. The vinyl polymer having oxygen-containing pendant groups are chemically modified due to the affinity between the oxygen-containing pendant groups and polar sites on the vulcanized rubber polymer (col. 4, lines 38-42). As such, Jury fails to teach or suggest an "unmodified" PVOH. Therefore, it is respectfully submitted that Jury fails to teach or suggest Applicants' claimed invention.

The Examiner indicates that the compositions of Jury may also contain other thermoplastic resins, such as unmodified polyvinyl alcohol (col. 4, lines 24+). In response, Applicants respectfully submit that Applicants have amended their claimed invention to recite that the present invention consists essentially of from about 50 to about 99% by weight of an unmodified polyvinyl alcohol and from about 49 to about 1% by weight of a thermoplastic elastomer. Applicants respectfully submit that the vulcanized rubber crumb in Jury would be excluded from Applicants' claimed invention since the vulcanized rubber crumb would materially alter Applicants' claimed invention.

The Examiner has requested that Applicants provide additional evidence of how the vulcanized rubber crumb would materially alter Applicants' claimed invention and how the removal of the vulcanized rubber crumb would materially alter Jury. Applicants respectfully submit that the teachings of Jury provide all the evidence needed and to ignore the direct teachings of Jury is improper. Jury clearly states that the vulcanized rubber crumb compositions of Jury are used to vulcanized rubber articles, such as tires. These materials are clearly not water soluble, and it would not be desirable for them to be water soluble. No one wants a tire that would eventually dissolve in water. As such, to remove the rubber crumb from the Jury compositions would result in a water-soluble tire. As such, it would not have been obvious to remove the rubber crumb.

Conversely, since Applicants' claimed films are used in disposable products, it would not be obvious to add vulcanized rubber crumb as this would create a water-insoluble material (see Jury) and would defeat the purpose of making a film useful in disposable personal care articles. As such, any water insoluble material, such as vulcanized rubber crumb, would be excluded from Applicants' invention, as now claimed. In addition, since Jury is directed to the formation of rubber articles, it would not have been obvious to remove the vulcanized rubber crumb from Jury as this would completely destroy the intended purpose of Jury – to form a rubber article. As such, the evidence for vulcanized rubber crumb from Applicants' claimed invention as well as keeping the vulcanized rubber crumb in Jury is clearly provided since the vulcanized rubber crumb would negatively impact the water solubility of Applicants' claimed compositions and articles, thereby negatively impacting the characteristics of the desired final products. Accordingly, it is respectfully submitted that Jury fails to teach or suggest Applicants' claimed invention.

For at least the reasons given above, Applicants respectfully submit that Claim 1 and Claim 17 are allowable over the art of record. Furthermore, since Claims 2-16 and 18-35 recite additional claim features and depend from Claim 1 or Claim 17, these claims are also allowable over the art of record. Accordingly, Applicants respectfully request withdrawal of this rejection.

**II. Conclusion:**


For at least the reasons given above, Applicants respectfully submit that Claims 1-12, 14-25 and 27-35 define patentable subject matter. Accordingly, Applicants respectfully request allowance of these claims.

The foregoing is submitted as a full and complete Response to the Final Office Action mailed November 13, 2002, the Advisory Action mailed March 17, 2003 and the Request for Continued Examination filed April 13, 2003, and early and favorable consideration of the claims is requested.

Should the Examiner believe that anything further is necessary in order to place the application in better condition for allowance, the Examiner is respectfully requested to contact Applicants' representative at the telephone number listed below.

No additional fees are believed due; however, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 11-0855.

Respectfully submitted,



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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**Amendments in the Claims**

In accordance with 37 C.F.R. 1.121(c), the following versions of the specification and claims as rewritten by the foregoing amendments show all changes made relative to the previous version of the specification and claims.

**In The Claims:**

Please cancel Claims 13 and 26.

Please amend the claims as follows:

1. (Twice Amended) A substantially water-free thermoplastic article consisting essentially of from about [1] 50 to about 99% by weight of an unmodified polyvinyl alcohol and from about [99] 49 to about 1% by weight of a thermoplastic elastomer.

17. (Twice Amended) A thermoplastic article consisting essentially of from about [1] 50 to about 99% by weight of an unmodified polyvinyl alcohol and from about [99] 49 to about 1% by weight of a thermoplastic elastomer, wherein the thermoplastic article has less than about 2.0 percent by weight of water.

30. (Twice Amended) A substantially water-free blend composition consisting essentially of from about [1] 50 to about 99% by weight of an unmodified polyvinyl alcohol and from about [99] 49 to about 1% by weight of a thermoplastic elastomer.